

Abstract

An electrical substrate for use as a carrier of biomolecules in a method for electrochemical detection in an electrolyte solution exhibits an insulating support plate (12) bearing a conductive pattern (20; 20A-20C, 28) having conductor paths (20; 20A-20C) and connecting contact surfaces, and, disposed on the conductor paths (20; 20A-20C), test sites (24) for the application of biomolecules (26), the conductor paths (20; 20A-20C) exhibiting a metal core (14) made of a highly conductive base metal and an external gold layer (18), and the conductor paths (20; 20A-20C) being provided with a diffusion barrier layer (16) that prevents direct contact of the electrolyte solution with the metal core (14) during the electrochemical detection method.